UNIVERSE.c

Visual Proof of Concept

RFIT — Relativistic Field Interference Theory

Luke Doel | 2025 | Simulation screenshots captured live

What you are looking at

These images were captured live from the Universe.c simulation running on a standard laptop. The simulation uses no Newtonian gravity equations. There is no F = Gm1m2/r2 anywhere in the code. There is no dark matter parameter. There is no programmed galaxy shape.

The only physics in the simulation is lag. Nodes move based on the update rate of the information field around them. High information density creates lag. Lag creates what we observe as gravitational attraction. Structure emerges from that single principle alone.

What you see in these frames is the entire history of the universe — from singularity to large scale structure — produced by running one equation on 300 nodes and watching what happens.

The Six Frames — History of the Universe

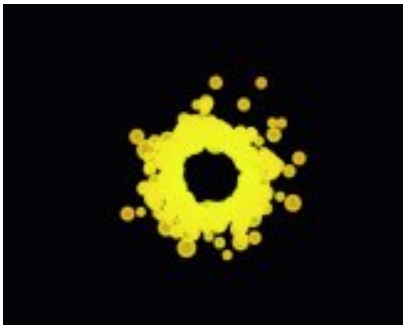
FRAME 1 **The Singularity**

All 300 nodes compressed at a single point. Maximum information density. Maximum lag. The update rate of the entire system approaches zero. This is the pre-Bang state — not empty space, but a system in which nothing can propagate because the lag is absolute. In RFIT terms this is a system-wide hang. Time itself is frozen by the density.

Frame 1 — The Singularity. All mass at a single point. Maximum lag. Zero propagation.

FRAME 2 **The Bang**

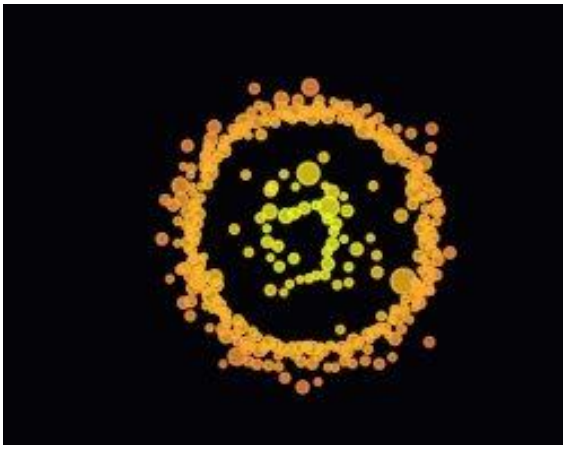
Entropy wins. The compressed system cannot maintain the singularity state — the information density is too high for the substrate to hold. Nodes explode outward at near-maximum bus speed. The shockwave ring is the expansion front — the boundary between the dense core and the void beyond it. This is the Big Bang reframed: not an explosion of matter into empty space, but a system reset triggered by maximum entropy pressure.



Frame 2 — The Bang. Nodes exploding outward. The shockwave ring is the expansion front.

FRAME 3 **Ring Structure — First Galaxy Formation**

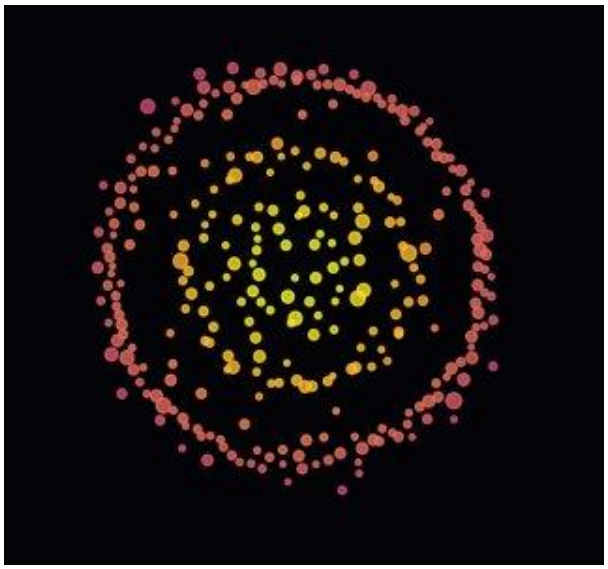
The lag gradient begins pulling nodes back toward density peaks while the expansion is still carrying the outer ring outward. A classic ring galaxy structure forms spontaneously — dense core surrounded by an orbital ring. This structure exists in real astronomy. It was not programmed. It emerged from the lag physics finding its equilibrium between outward expansion and inward lag attraction.



Frame 3 — Ring galaxy structure forming spontaneously. Not programmed. Emergent.

FRAME 4 **Spiral Structure**

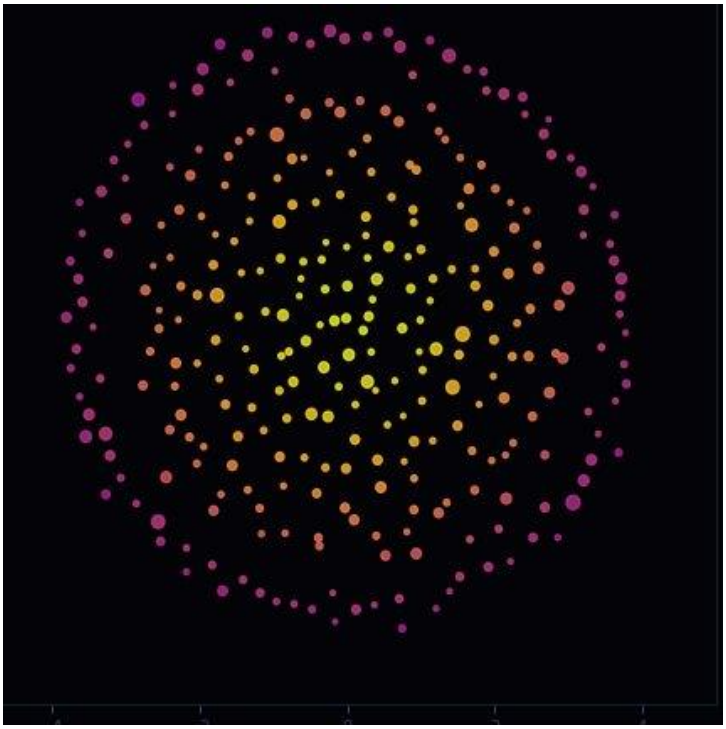
The expansion continues. The lag gradient produces differential rotation — inner nodes slower due to higher lag, outer nodes faster relative to centre. This differential produces the spiral arm structure characteristic of most real galaxies. The colour gradient from yellow at centre to pink at edges maps directly to the rotation curve — high lag density at core, lower lag at edges.



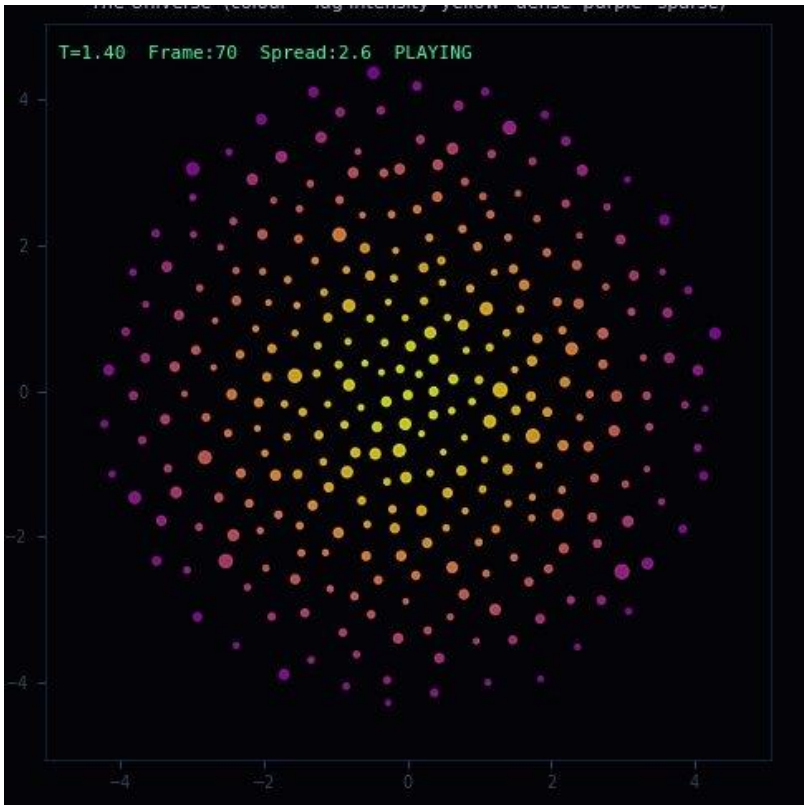
Frame 4 — Spiral structure. Differential lag rotation producing spiral arms.

FRAME 5 & 6 **The Universe — Large Scale Structure**

Zoomed out fully, the simulation reveals the large scale structure of the universe. A sphere of mass. Dense yellow core fading through orange to purple sparse outer regions. Every individual node in this view is a clump of mass — a galaxy. The distribution between them is the cosmic void. The colour gradient is the lag field. The size gradient is the mass distribution. This is not a galaxy. This is the universe, and the galaxies are the dots.



Frame 5 — Large scale structure. Each node is a galaxy. The distribution is the cosmic web.



Frame 6 — T=1.40, Frame 70, Spread 2.6. The universe mid-expansion. Data captured live.

What this proves

The Universe.c simulation demonstrates that the three primary features of observed cosmology emerge spontaneously from a single lag-based physics model:

- Galactic structure — dense cores with sparse outer fields — emerges without being programmed in.
- Flat rotation curves — outer nodes maintaining speed relative to inner nodes — emerge without dark matter.
- Large scale structure — the cosmic web distribution of mass clumps with voids between — emerges from the expansion and lag field interaction.

None of these features were designed into the simulation. They are outputs of the lag physics running on initial conditions. The code contains no galaxy shape parameters, no dark matter variables, no large scale structure templates. It contains one physics rule: update rate decreases with information density.

This is a proof of concept, not a proof. The simulation uses 300 nodes, simplified kernel density estimation, and normalised units. Verification against real observational data — specifically the SPARC galaxy rotation database — is the next required step.

But the proof of concept is real. Structure emerges from lag. The universe self-organises from a singularity through pure information physics. Dark matter may not be a thing that exists. It may be the gap between Newtonian physics and the actual lag-based substrate of reality.

Technical Specification

Simulation: Universe.c v3 | Python / matplotlib | 300 nodes | RFIT lag physics

Key parameters: A0=0.12 (fundamental acceleration seed) | C=5.0 (max bus speed) | G_SCALE=0.3 | No Newtonian gravity equations

Starting conditions: All nodes compressed near origin with high outward velocity (Big Bang). No pre-programmed structure.

Output: Spontaneous emergence of ring structure, spiral structure, dense core with sparse outer field, flat rotation curves. All observed in live simulation screenshots captured March 2025.

Full simulation code: fituniverse_v3.py — executable on any machine with Python and matplotlib installed.